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EXAMINER

DEAN, RAYMOND S

ART UNIT

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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/614,231	Applicant(s) BLACK ET AL.	
	Examiner Raymond S. Dean	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Pre-Appeal Brief Request filed March 19, 2007 with respect to the rejection(s) of claim(s) 1 and 23 under 35 U.S.C. 102(e), have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. More specifically, Applicant's arguments against Mansour teaching all of the elements in the independent claims are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of Whinnett et al. (EP 0663737).

Whinnett teaches a method for establishing direct mobile-to-mobile communication between cellular mobile terminals, said method comprising: selecting a frequency designated as a cellular mobile communication frequency within a cellular communication system (Cols. 2 lines 10 – 22, lines 57 – 58, 3 lines 1 – 3); transmitting by a first cellular mobile terminal a communication initiation sequence at the selected frequency (Cols. 4 lines 43 – 58, 5 lines 1 – 9); monitoring by a second cellular mobile terminal the designated mobile communication frequencies; and detecting by the second cellular mobile terminal the communication initiation sequence (Cols. 4 lines 43 – 58, 5 lines 1 – 9).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 – 2, 11 – 21, 23, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Whinnett et al. (EP 0663737).

Regarding Claim 1, Whinnett teaches a method for establishing direct mobile-to-mobile communication between cellular mobile terminals, said method comprising: selecting a frequency designated as a cellular mobile communication frequency within a cellular communication system (Cols. 2 lines 10 – 22, lines 57 – 58, 3 lines 1 – 3, 4 lines 26 – 31, there are a plurality of base stations which enable cells to be created thus the system is a trunked cellular system); transmitting by a first cellular mobile terminal a communication initiation sequence at the selected frequency (Cols. 4 lines 43 – 58, 5 lines 1 – 9); monitoring by a second cellular mobile terminal the designated mobile communication frequencies; and detecting by the second cellular mobile terminal the communication initiation sequence (Cols. 4 lines 43 – 58, 5 lines 1 – 9).

Regarding Claim 2, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett further teaches wherein prior to transmitting by a first cellular mobile terminal a communication initiation sequence at the selected frequency, a user actuation is received (Col. 4 lines 33 – 40).

Regarding Claim 11, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett further teaches frequency and timing information for use in the remainder of the communication between the cellular mobile terminals (Cols. 4 lines 57 – 58, 5 lines 1 – 9).

Regarding Claim 12, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett further teaches prior to selecting a frequency and further establishing the direct mobile-to-mobile communication, scanning for existing network coverage by the first cellular mobile terminal, wherein direct mobile-to-mobile communication is authorized in areas where at least one of cellular network coverage is insufficient or where authorization for direct mobile to mobile communication is obtained from the cellular network (Col. 4 lines 26 – 31, the mobile communications system supports mobile to mobile calls thus there will be authorization for said mobile to mobile calls).

Regarding Claim 13, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett further teaches wherein, when the authorization is obtained from the cellular network, the frequency selected corresponds to any frequency designation supplied by the cellular network (Cols. 2 lines 57 – 58, 3 lines 1 – 3).

Regarding Claim 14, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett further teaches after selecting a frequency, selecting a channel associated with the selected frequency after monitoring the channel to insure the channel is not being currently used (Col. 5 lines 10 – 36, monitoring the frequency comprise monitoring the channel).

Regarding Claim 15, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett further teaches wherein the initiation sequence is transmitted for a period of time having a duration that overlaps at least a portion of the wake-up period of the second cellular mobile terminal (Cols. 2 lines 10 – 22, 4 lines 43 – 58, 5 lines 1 –

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9, typical TDMA mobile stations operate in slotted modes in which said stations have wake and sleep periods).

Regarding Claim 16, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett further teaches wherein after detecting the communication initiation sequence by the second cellular mobile terminal, the second cellular mobile terminal transmits an acknowledgement signal, in response to a detected communication initiation sequence (Cols. 4 lines 57 – 58, 5 lines 1 – 9).

Regarding Claim 17, Whinnett teaches all of the claimed limitations recited in Claim 16. Whinnett further teaches wherein the acknowledgement signal includes receiver quality data (Cols. 4 lines 57 – 58, 5 lines 1 – 9, the mobile station will transmit a reply, which is the acknowledgement, said acknowledgement will be transmitted at an adequate signal strength or power, which is quality data, such that the initiating mobile station can receive said acknowledgement successfully).

Regarding Claim 18, Whinnett teaches all of the claimed limitations recited in Claim 17. Whinnett further teaches wherein the receiver quality data includes receiver level information (Cols. 4 lines 57 – 58, 5 lines 1 – 9, the mobile station will transmit a reply, which is the acknowledgement, said acknowledgement will be transmitted at an adequate signal strength or power level, which is quality data, such that the initiating mobile station can receive said acknowledgement successfully).

Regarding Claim 19, Whinnett teaches all of the claimed limitations recited in Claim 16. Whinnett further teaches wherein the acknowledgement signal is transmitted by the second cellular mobile terminal at the selected frequency at alternative times

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relative to the transmissions from the first cellular mobile terminal at the selected frequency (Cols. 4 lines 57 – 58, 5 lines 1 – 9, the mobile station will transmit the response, which is the acknowledgement, to the initiating mobile station during times when said initiating mobile station is not transmitting such that said initiating mobile station can receive said acknowledgement successfully).

Regarding Claim 20, Whinnett teaches all of the claimed limitations recited in Claim 19. Whinnett further teaches wherein the alternative times that the second cellular mobile terminal transmits a signal at the selected frequency has a predetermined time offset relative to any corresponding adjacent transmission from the first cellular mobile terminal (Cols. 4 lines 57 – 58, 5 lines 1 – 9, the mobile station will transmit the response, which is the acknowledgement, to the initiating mobile station during times when said initiating mobile station is not transmitting such that said initiating mobile station can receive said acknowledgement successfully, these times will be offset from the time the initiating mobile station is transmitting).

Regarding Claim 21, Whinnett teaches all of the claimed limitations recited in Claim 19. Whinnett further teaches wherein the transmissions from each of the first and second cellular mobile terminals at the selected frequency are part of a time division duplex channel (Col. 2 lines 10 – 22, TDMA comprising TDD).

Regarding Claim 23, Whinnett teaches a cellular mobile terminal adapted for direct mobile to mobile communication, said mobile terminal comprising: a cellular transmitter (Cols. 4 lines 26 – 31, 5 lines 49 – 53, there are a plurality of base stations which enable cells to be created thus the system is a trunked cellular system); a

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cellular receiver (Col. 5 lines 49 – 53); and a control circuit, coupled to the cellular transmitter and the cellular receiver (Col. 5 lines 49 – 53, typical mobile stations comprise control circuits), wherein at least one of the cellular transmitter and the cellular receiver functions at a frequency of operation, corresponding to the other one of the cellular transmitter and the cellular receiver (Cols. 4 lines 43 – 58, 5 lines 1 – 9).

Regarding Claim 28, Whinnett teaches all of the claimed limitations recited in Claim 23. Whinnett further teaches a user actuated switch initiates a mobile -to-mobile communication (Col. 4 lines 33 – 40).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 – 5, 7 – 10, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (EP 0663737) in view of Hunzinger et al. (US 2004/0116132).

Regarding Claim 3, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett does not teach determining the region in which the first cellular mobile terminal is operating, and selecting a cellular mobile communication frequency for the determined region.

Hunzinger teaches determining the region in which the first cellular mobile terminal is operating, and selecting a cellular mobile communication frequency for the determined region (Sections: 0026, 0029 – 0039, when the wireless communication system for the location is selected there will be a frequency provided by said system for use).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Whinnett with the determination and selection method of Hunzinger for the purpose of providing a system where the mobile station can limit the number of systems required for searching based on the geographic location of the mobile station thereby optimizing service acquisition as taught by Hunzinger.

Regarding Claim 4, Whinnett in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches wherein the cellular mobile communication frequency is a mobile transmission frequency for the determined region (Sections: 0026, 0029 – 0039, when the wireless communication system for the location is selected there will be a frequencies provided by said system for use, said frequencies comprise transmission and reception frequencies).

Regarding Claim 5, Whinnett in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches wherein the cellular mobile communication frequency is a cellular mobile reception frequency for the determined region (Sections: 0026, 0029 – 0039, when the wireless communication system for the

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location is selected there will be a frequencies provided by said system for use, said frequencies comprise transmission and reception frequencies).

Regarding Claim 7, Whinnett in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches receiving one or more global positioning system signals (Section 0029).

Regarding Claim 8, Whinnett in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches maintaining a record of the last region in which the first cellular mobile terminal successfully operated (Section 0032).

Regarding Claim 9, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett does not teach selecting a frequency that is designated as a cellular mobile transmit frequency in a first supported region and is designated as a cellular mobile received frequency in a second supported region.

Hunzinger teaches selecting a frequency that is designated as a cellular mobile transmit frequency in a first supported region and is designated as a cellular mobile received frequency in a second supported region (Sections: 0026, 0029 – 0039, the mobile can select for example a North American GSM system in one location and a European GSM system in another location, the frequency band for receiving in the North American system is the same as the frequency band for transmitting in the European system).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Whinnett with the determination and

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selection method of Hunzinger for the purpose of providing a system where the mobile station can limit the number of systems required for searching based on the geographic location of the mobile station thereby optimizing service acquisition as taught by Hunzinger.

Regarding Claim 10, Whinnett in view of Hunzinger teaches all of the claimed limitations recited in Claim 9. Hunzinger further teaches wherein the first supported region is the region in which the first cellular mobile terminal is operating (Sections: 0026, 0029 – 0039).

Regarding Claim 22, Whinnett teaches all of the claimed limitations recited in Claim 1. Whinnett does not teach wherein the cellular mobile terminals including the first cellular mobile terminal and the second cellular mobile terminal are multi-region devices.

Hunzinger teaches wherein a cellular mobile terminal including a cellular mobile terminal is a multi-region device (Sections: 0026, 0029 – 0039, the device can be in operate in different geographical locations).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Whinnett with the determination and selection method of Hunzinger for the purpose of providing a system where the mobile station can limit the number of systems required for searching based on the geographic location of the mobile station thereby optimizing service acquisition as taught by Hunzinger.

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6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (EP 0663737) in view of Hunzinger et al. (US 2004/0116132) as applied to Claim 3 above, and further in view of Tanaka (US 6,819,919).

Regarding Claim 6, Whinnett in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Whinnett in view of Hunzinger does not teach receiving an operating region selection from a user.

Tanaka teaches receiving an operating region selection from a user (Column 3 lines 7 – 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Whinnett in view of Hunzinger with the selection method of Tanaka for the purpose of providing an alternative means for providing the location of the mobile station as taught by Tanaka.

7. Claims 24, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (EP 0663737) in view of Abdelgany et al. (US 6,584,090).

Regarding Claim 24, Whinnett teaches all of the claimed limitations recited in Claim 23. Whinnett does not teach wherein the cellular receiver includes a pre-selection filter, which is passes frequencies including cellular transmitter frequencies of operation of the mobile terminal.

Abdelgany teaches a pre-selection filter, which passes frequencies including cellular transmitter frequencies of operation of the mobile terminal (Column 13 lines 8 – 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Whinnett with the filter of Abdelgany for the purpose of passing only the appropriate transmission band for CDMA as taught by Abdelgany.

Regarding Claim 26, Whinnett teaches all of the claimed limitations recited in Claim 23. Whinnett does not teach wherein the cellular transmitter includes a transmission bandpass filter, which is passes frequencies including cellular receiver frequencies of operation of the mobile terminal.

Abdelgany teaches a bandpass filter, which passes frequencies including cellular receiver frequencies of operation of the mobile terminal (Column 13 lines 37 – 39, image reject filters are bandpass filters).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Whinnett with the filter of Abdelgany for the purpose of filtering out image noise, which is a standard function of image reject filters.

8. Claims 25, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (EP 0663737) in view of Abdelgany et al. (US 6,208,844).

Regarding Claim 25, Whinnett does not teach wherein the cellular receiver includes a voltage-controlled oscillator having an operational range that is extended to include transmitter frequencies of operation of the mobile terminal.

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Abdelgany teaches a voltage-controlled oscillator having an operational range that is extended to include transmitter frequencies of operation of the mobile terminal (Column 6 lines 36 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Whinnett with the voltage-controlled oscillator (VCO) of Abdelgany for the purpose of up-converting the signal transmitted from the mobile terminal to the proper transmit radio frequency (RF) as taught by Abdelgany.

Regarding Claim 27, Whinnett does not teach wherein the cellular transmitter includes a voltage-controlled oscillator having an operational range that is extended to include receiver frequencies of operation of the mobile terminal.

Abdelgany teaches a voltage-controlled oscillator having an operational range that is extended to include receiver frequencies of operation of the mobile terminal (Column 7 lines 31 – 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Whinnett with the voltage-controlled oscillator (VCO) of Abdelgany for the purpose of down-converting the signal received at the mobile terminal to the proper intermediate frequency (IF) for further processing as taught by Abdelgany.


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Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Raymond S. Dean
June 7, 2007


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